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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/031,436 | 01/22/2002 | Teruko Fujii | 2611-0169P | 6172 |
| 2292 7590 01/05/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | EXAMINER NGUYEN, THANH T | |
| | | | ART UNIT 2144 | PAPER NUMBER |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | | NOTIFICATION DATE | |
| 3 MONTHS | | | 01/05/2007 | |
| | | | DELIVERY MODE ELECTRONIC | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/05/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/031,436

Applicant(s)

FUJII ET AL.

Examiner

Tammy T. Nguyen

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on October 6, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on January 33, 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.



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Detailed Office Action

1. This Action is responsive to the amendment filed on October 6, 2006
2. Claims 1-12 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuguchi et al., (hereinafter Mizuguchi) U.S. Patent No. 6,310, 885 in view of Mohan Babu Rowlands., (hereinafter Rowlands) U.S. Patent No. 6,636,982.
5. As to claim 1, Mizuguchi teaches the invention as claimed, including a communication method for conducting communication among nodes that form a communication network of bus type by using set communication parameters, the communication method comprising: a designation step of designating other nodes as slave nodes, and forming a logical star connection, and a determination step of

determining communication parameters between said master node and respective slave nodes (master node 101 and slave node 102 are connected) (A token packet specifying a transmission node and receiving node is output from master node to all nodes, also see col.4, lines 19-26, col.4, line 60 to col.5, line 23); and a communication step of conducting communication between said slave nodes via said master node by using communication parameters determined in the determination step (see col.col.4, line 60 to col.5, line 23). However, Mizuguchi does not explicitly disclose a master node based on transmission qualities among the nodes.

In the same field endeavor, Rowlands discloses (e.g., apparatus and method for detecting the reset of a node in a cluster computer system). Rowlands discloses a master node based on transmission qualities among the node [see col.27, line 45 to col.28, line 4].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time of the invention was made to have incorporated Rowlands's teachings of a apparatus and method for detecting the reset of a node in a cluster computer system with the teachings of Mizuguchi to have a master node based on transmission qualities among nodes because it would have provided for the purpose of inexpensive and uncomplicated personal-computer and server platforms [see Rowlands, col.1, lines 40-45].

6. As to claim 2, Mizuguchi teaches the invention as claimed, wherein the communication method further comprising: an alteration step in which said master node monitors communication states between said master node and at least one of

said slave nodes and alters successively communication parameters between said master node and said at least one of said slave nodes (see col.5, lines 1-32).

7. As to claim 8, Mizuguchi teaches the invention as claimed, including a communication system for conducting communication among nodes that form a communication network of bus type by using set communication parameters, said communication system comprising: one master node selected from among said nodes (master node 101 of fig.1); and one or more slave nodes that are nodes other than said master node, said one or more slave nodes logically star-connected to said master node (master node 101 and slave node 102 are connected), each of said one or more slave nodes conducting communication with another node via said master node by using communication parameters negotiated with said master node (A token packet specifying a transmission node and receiving node is output from master node to all nodes, also see col.4, lines 19-26, col.4, line 60 to col.5, line 23). However, Mizuguchi does not explicitly disclose a master node based on transmission qualities among the nodes.

In the same field endeavor, Rowlands discloses (e.g., apparatus and method for detecting the reset of a node in a cluster computer system). Rowlands discloses a master node based on transmission qualities among the node [see col.27, line 45 to col.28, line 4].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time of the invention was made to have incorporated Rowlands's teachings of a apparatus and method for detecting the reset of a node in a

cluster computer system with the teachings of Mizuguchi to have a master node based on transmission qualities among nodes because it would have provided for the purpose of inexpensive and uncomplicated personal-computer and server platforms [see Rowlands, col.1, lines 40-45].

8. As to claim 9, Mizuguchi teaches the invention as claimed, wherein said master node comprises an alteration unit which monitors communication states between said master node and said one or more slave nodes and altering successively communication parameters between said master node and said one or more slave nodes (see col.col.4, line 60 to col.5, line 23).
9. Claims 3-5, 7, 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizuguchi et al., (hereinafter Mizuguchi) U.S. Patent No. 6,310,885, Mohan Babu Rowlands., (hereinafter Rowlands) U.S. Patent No. 6,636,982 in view of Basani et al., (hereinafter Basani) U.S. Patent No. 6,718,361.
10. As to claim 3, Mizuguchi teaches the invention as claimed, including a communication method for conducting communication among nodes that form a communication network of bus type by using set communication parameters, the communication method comprising: an initial step of designating a node that logical star connection with other nodes were conducted, designating other nodes as slave nodes, and star-connecting the nodes logically (fig.10) (see col.7, lines 1-32); and an alteration step, responsive to existence of such a node that would become best in

transmission quality when logical star connections (Fig.10)(see col.7, lines 1-37).

However, Mizuguchi does not explicitly disclose a master node based on transmission qualities among the nodes.

In the same field endeavor, Rowlands discloses (e.g., apparatus and method for detecting the reset of a node in a cluster computer system). Rowlands discloses a master node based on transmission qualities among the node [see col.27, line 45 to col.28, line 4].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time of the invention was made to have incorporated Rowlands's teachings of a apparatus and method for detecting the reset of a node in a cluster computer system with the teachings of Mizuguchi to have a master node based on transmission qualities among nodes because it would have provided for the purpose of inexpensive and uncomplicated personal-computer and server platforms [see Rowlands, col.1, lines 40-45]. Also, Mizuguchi and Rowlands do not explicitly teach other nodes were conducted in response to connection of a new node or a change of a communication state, of altering said node to a master node and altering a current master node to a slave node. However, Basani discloses other nodes were conducted in response to connection of a new node or change of a communication state (voting for group leader of fig.5)(see col.5, lines 57 to col.6, lines 35). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Basani into the computer system of Mizuguchi to have other node were conducted in response to connection of a new node of change

of a communication state because it would have provided nearness, processor speed, and liability or CPU usage.

11. As to claim 4, Mizuguchi teaches the invention as claimed, wherein the alteration step comprises a transfer step of transferring communication parameters among all nodes inclusive of the current master node held by the current master node to a master node after alteration (see col.4, line 60 to col.5, line23).
12. As to claim 5, Mizuguchi teaches the invention as claimed, wherein the alteration step comprises a notice step in which the master node after alteration sends a notice to the effect that its own master node has been altered to the master node, to other nodes (Fig.1) (see col.4, lines 15-38).
13. As to claim 7, Mizuguchi teaches the invention as claimed, including a communication method for conducting communication among nodes that form a communication network of bus type by using set communication parameters, the communication method comprising: a sub-master designation step of designating, for each of said grouped node groups, a node having best transmission qualities with respect to other nodes in its own node group, as a sub-master node (sub-master node 103, and 105 of fig.1) and a logical connection step of logically star-connecting said sub-master node to said master node and logically star-connecting other nodes in its own node group to said sub-master node (see col.5, lines 2- 47 and col.7, lines 1-44). However, Mizuguchi does not explicitly disclose a master node based on transmission qualities among the nodes.

In the same field endeavor, Rowlands discloses (e.g., apparatus and method for detecting the reset of a node in a cluster computer system). Rowlands discloses a master node based on transmission qualities among the node [see col.27, line 45 to col.28, line 4].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time of the invention was made to have incorporated Rowlands's teachings of a apparatus and method for detecting the reset of a node in a cluster computer system with the teachings of Mizuguchi to have a master node based on transmission qualities among nodes because it would have provided for the purpose of inexpensive and uncomplicated personal-computer and server platforms [see Rowlands, col.1, lines 40-45]. Also, Mizuguchi and Rowlands do not explicitly teach a grouping nodes each have favorable transmission qualities. However, Basani teaches grouping nodes each have favorable transmission qualities (nodes group 24a and 24b of fig.1) (see col.5, lines 32-55 and col.6, lines 19-35). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Basani into the computer system of Mizuguchi to have grouping nodes each have favorable transmission qualities because it would have efficient system for transmission of data files and highly scalable and avoids the unreliability, and latency.

14. As to claim 10, Mizuguchi teaches the invention as claimed, including the communication system for conducting communication among nodes that form a communication network of bus type by using set communication parameters, wherein

each node comprises a processing unit, and if its own node is designated as a master node logically star-connected to other nodes processing unit conducts processing of ordering alteration of said node to a master node and transferring communication parameters among all nodes currently held to a master node after alteration (A token packet specifying a transmission node and receiving node is output from master node to all nodes, also see col.4, lines 19-26, col.4, line 60 to col.5, line 23). However, Mizuguchi does not explicitly disclose a master node based on transmission qualities among the nodes.

In the same field endeavor, Rowlands discloses (e.g., apparatus and method for detecting the reset of a node in a cluster computer system). Rowlands discloses a master node based on transmission qualities among the node [see col.27, line 45 to col.28, line 4].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time of the invention was made to have incorporated Rowlands's teachings of a apparatus and method for detecting the reset of a node in a cluster computer system with the teachings of Mizuguchi to have a master node based on transmission qualities among nodes because it would have provided for the purpose of inexpensive and uncomplicated personal-computer and server platforms [see Rowlands, col.1, lines 40-45]. Also, Mizuguchi and Rowlands do not explicitly teach other nodes were conducted in response to connection of a new node or a change of a communication state. However, Basani discloses other nodes were conducted in response to connection of a new node or change of a communication

- state (voting for group leader of fig.5)(see col.5, lines 57 to col.6, lines 35). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Basani into the computer system of Mizuguchi to have other node were conducted in response to connection of a new node of change of a communication state because it would have provided nearness, processor speed, and liability or CPU usage.
15. As to claim 11, Mizuguchi teaches the invention as claimed, wherein each node further comprises a notice unit which sends a notice to the effect that its own node has been designated as the master node, to other nodes, when its own node is designated as said master node after alteration (see col.4, lines 19-67).
16. As to claim 12, Mizuguchi teaches the invention as claimed, including a communication system for conducting communication among nodes that form a communication network of bus type system comprising: a master node that is selected from among all nodes and that is best in transmission quality with respect to other nodes (master node 101 of fig.1); having best transmission qualities with respect to other nodes in its own node group and said master node, said sub-master node being logically star-connected to said master node (sub-master node 103, and 105 connect to master node 101 of fig.1); and slave nodes logically star-connected in each node group to said sub-master node (see col.5, lines 2- 47 and col.7, lines 1-44). However, Mizuguchi does not explicitly disclose a master node based on transmission qualities among the nodes.

In the same field endeavor, Rowlands discloses (e.g., apparatus and method for detecting the reset of a node in a cluster computer system). Rowlands discloses a master node based on transmission qualities among the node [see col.27, line 45 to col.28, line 4].

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time of the invention was made to have incorporated Rowlands's teachings of a apparatus and method for detecting the reset of a node in a cluster computer system with the teachings of Mizuguchi to have into a master node based on transmission qualities among nodes because it would have provided for the purpose of inexpensive and uncomplicated personal-computer and server platforms [see Rowlands, lines 40-45]. Also, Mizuguchi and Rowlands do not explicitly teach a grouping nodes each have favorable transmission qualities. However, Basani teaches grouping nodes each have favorable transmission qualities (nodes group 24a and 24b of fig.1) (see col.5, lines 32-55 and col.6, lines 19-35). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Basani into the computer system of Mizuguchi to have grouping nodes each have favorable transmission qualities because it would have efficient system for transmission of data files and highly scalable and avoids the unreliability, and latency.

Response to Arguments

17. Applicant's arguments filed on October 8, 2006 have been fully considered, however they are not persuasive because of the following reasons:

18. Applicants argue that Rowlands does not teach of designating a master node, based on transmission qualities among the nodes. In response to Applicant's argument, the Patent Office maintain the rejection because Rowlands does teach designating a master node, based on transmission qualities among the nodes as shown in col.27, line 45 to col.28, line 4 (first node sending a command to be executed by second node for loading balancing and immediately before second node failed, second node was a master node and first node was a slave node, and after second node becomes operational after diagnosing step first node is a master node and second is a slave node). Rowlands clearly discloses the application claimed invention.
19. Therefore, the Examiner asserts that cited prior arts teach or suggest the subject matter broadly recited in independent claims 1, and 8. Claims 1-7, and 9-12 are also rejected at least by the virtue of their dependency on independent claims and by other reasons set forth in the previous office action.
20. Accordingly, claims 1-12 are respectfully rejected.

Conclusion

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

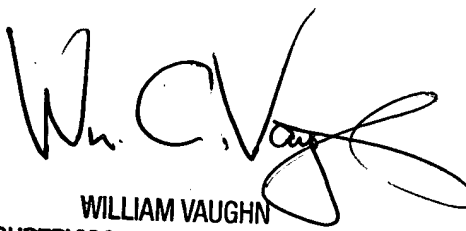
22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammy T. Nguyen whose telephone number is 571-272-3929. The examiner can normally be reached on Monday - Friday 8:30 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *William Vaughn* can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TTN

December 19, 2006


WILLIAM VAUGHN
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